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Anatomy

Lecture 7

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Respiratory block

THE MEDIASTINUM

BOUNDARIES	CONTENTS
Superior	
Superior: **thoracic outlet** Inferior: **horizontal plate** Anterior: **Manubrium of sternum** Posterior: **upper 4 thoracic vertebrae** Common lateral : **lungs and pleura**	• 4 arteries: **arch of aorta, left common carotid, left subclavian, brachiosephalic.** • 3 veins: **left & right brachiosephalic, superior vena ceva.** • 4 nerves: **left and right of the two vagus and phrenic nerves** • 1 duct: **thoracic duct** • 1 gland: **thymus gland** • 2 tubes: **trachea, oesophagus.** • **Lymph nodes**
Inferior	
a-anterior	
Common Superior: **the Horizontal plate.** Common inferior: **diaphragm.** Common lateral: **lungs and pleura.** Anterior: **body and xiphiod of sternum.** Posterior: **the heart.**	**Only the Thymus gland** **And some lymph nodes**
b-middle	
Between the anterior & posterior mediastinum	• **The heart and pericardium.** • **Pulmonary trunk** • 1 artery: **ascending aorta**. • 4 veins: **superior and inferior vena ceva, right and left pulmonary veins .** • 2 nerves: **left and right phrenic nerve.** • **And some lymph nodes**
c-posterior	
Common Superior: **the Horizontal plate.** Common inferior: **diaphragm.** Common lateral: **lungs and pleura.** Anterior: **the heart** Posterior: **the rest of the thoracic vertebrae from T5 to T12**	• **Esophagus** • **Vagus nerves:** around esophagus • **Thoracic duct:** posterior to esophagus • **Azygos vein:** posterior & to the right of esophagus • **Descending aorta:** posterior & to the left of esophagus • **Right & left sympathetic trunks** • **Lymph nodes**

Structures that mentioned more than once in more than divition

- ☐ **1- superior vena ceva: superior + middle.**
- ☐ **2- pherinic nerve: superior + middle.**
- ☐ **3- thoracic duct: superior + posterior.**
- ☐ **4- vagus nerve: superior + posterior.**
- ☐ **5- esophagus: superior + posterior.**
- ☐ **6- thymus gland: superior + anterior.**

Level of thoracic 4

It is a very important place and a lot of things happened here

First:

Level of:
- Sternal angle
- Second costal cartilage

second:

Level of:
- Bifurcation of trachea
- Bifurcation of pulmonary trunk
- Beginning & termination of arch of aorta

VAGUS NERVE	
The right vagus	**The left vagus**
descends to the right side of trachea, forms 1-the posterior esophageal plexus & continues in abdomen as 2- posterior gastric nerve.	descends between left common carotid & left subclavian arteries, forms 1-the anterior esophageal plexus & continues in abdomen as 2- anterior gastric nerve.
PHRENIC NERVE C3,4,5	
The right phrenic	**The left phrenic**
descends on the right side of SVC & heart.	descends on the left side of heart

Both nerves The right phrenic & The left phrenic::::

- terminate in the diaphragm
- SUPPLY:

1) Motor & sensory fibers to diaphragm
2) Sensory fibers to pleurae & pericardium

THORACIC DUCT	
END:	❑ It ends in the left brachiocephalic vein.
COURSE:	❑ It passes through aortic opening of diaphragm. ❑ It ascends in posterior mediastinum (posterior to esophagus). ❑ It ascends in superior mediastinum (to the left of esophagus).
BEGINNING:	❑ It is the continuation of cysterna chyli.(from down)
TRIBUTARIES روافد: It receives: Lymphatics from all body EXCEPT: right side of thorax, right upper limb & right side of head & neck	

AORTA	
ASCENDING AORTA:	❑ Beginning: at aortic orifice of left ventricle. ❑ Course: in middle mediastinum ❑ End: continues as arch of aorta (at level of T4)
ARCH OF AORTA:	❑ Course: in superior mediastinum ❑ End: continues as descending (at level of T4)
DESCENDING AORTA	❑ Course: in posterior mediastinum ❑ End: continues as abdominal aorta through diaphragm